COMMONWEALTH OF MASSACHUSETTS
Energy Facilities Siting Board

The University of Massachusetts at Amherst, Request for Supplemental Advisory Ruling, EFSB 14-3	August XX, 2014

SUPPLEMENTAL ADVISORY RULING

In an Advisory Ruling issued on August 20, 2012 ("Advisory Ruling") the Energy Facilities Siting Board ("Siting Board" or "Board") advised the University of Massachusetts at Amherst ("UMASS") that it could construct and operate a temporary liquefied natural gas ("LNG") storage facility to fuel UMASS's Campus Heating Plant ("CHP").[1] The Advisory Ruling stated that the LNG storage facility would not require G.L. c. 164, §69J approval from the Siting Board provided that the storage capacity not exceed 30,000 gallons and that the facility operate no later than the end of the 2013/2014 heating season.[2]

By memorandum dated April 10, 2014 ("April 10 Memo") the consulting firm of Woodard & Curran, Inc. ("Woodard"), acting on behalf of UMASS, requested that the Siting Board confirm that UMASS could continue to operate its temporary LNG storage facility beyond the 2013/2014 heating season indefinitely without need of Siting Board approval.[3] On May 20, 2014, UMASS officials met with the Department of Public Utilities ("Department") Pipeline Engineering and Safety Division ("Pipeline Safety") to discuss the temporary LNG installation.

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1 The UMASS CHP facility is designed to produce steam for central heating and 16 megawatts of electric power for campus use. The Campus Heating Plant can also be described as a combined heat and power plant (Advisory Ruling at 1-2).

2 The Advisory Ruling was adopted by using the "Action by Consent" process described and authorized by 980 C.M.R. § 2.07. The Siting Board is authorized to issue advisory rulings pursuant to the provisions of 980 C.M.R. § 2.08 and G.L. c. 30A, § 8.

3 Woodard asserted that the actual volume of LNG stored at the UMASS facility has never exceeded the Siting Board's jurisdictional threshold of 25,000 gallons and would likely remain below 25,000 gallons in the future. However, the Advisory Ruling noted that UMASS's willingness to limit actual storage of LNG to less than 25,000 gallons does not affect the capacity of the facility with respect to the applicability of Board jurisdiction under 980 C.M.R. § 1.01(4)(e) (Advisory Ruling at 5).

As a follow up to the May 20 meeting, on June 17, 2014 the UMASS assistant director of utilities sent a letter (with supporting documentation) to the director of Pipeline Safety requesting permission to continue operating the temporary LNG storage facility through the winter of 2016/2017. On June 20, 2014, Woodard forwarded to the Siting Board the June 17 UMASS communication to Pipeline Safety and revised the request contained in Woodard's April 10 Memo; UMASS would instead seek an extension of the Advisory Ruling requesting that the university could continue operation of the temporary LNG storage facility, with up to 30,000 gallons of storage capacity, through the winter of 2016/2017.

I. BACKGROUND

A. The Initially Proposed UMASS LNG Facility

The UMASS CHP facility, commissioned in 2008, is a flexible dual-fuel installation that can burn natural gas, ultra-low-sulfur distillate oil ("ULSD"), or a combination of both at the same time. Because the CHP facility receives interruptible natural gas service from Berkshire Gas Company, gas deliveries are frequently curtailed in the winter. When natural gas is curtailed, UMASS has used ULSD as a supplemental fuel, albeit with higher costs, higher emissions, and limitations on operational flexibility compared to natural gas use. In its April 26, 2012 request for an Advisory Ruling, UMASS proposed to the Siting Board a temporary LNG storage facility to test the viability and economics of using LNG as a backup fuel for its CHP unit over the 2012/2013 and 2013/2014 winter seasons.[4]

UMASS considered two LNG storage alternatives. One alternative involved placing two skid-mounted 15,000-gallon LNG storage tanks with a skid-mounted vaporization unit next to the CHP plant, for a total storage capacity of 30,000 gallons. The other alternative involved parking two LNG tanker trailers next to the skid-mounted vaporization unit. Each tanker trailer would have a capacity ranging from 10,000 to 13,000 gallons, which would result in a total storage capacity of up to 26,000 gallons.

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[4] UMASS indicated that some use of ULSD would still be necessary during the winter, although it hoped to reduce the volume of ULSD as much as possible.

B. The Advisory Ruling

As noted in the Advisory Ruling, the Board must approve a petition for construction of any jurisdictional facility pursuant to G.L. c. 164, § 69J. "Facility" is defined in G.L. c. 164, § 69G, and includes a unit capable of storing LNG, "except such units below a minimum threshold size as established by regulation." Pursuant to this express statutory authority, the Siting Board has adopted a regulation providing for exemptions for certain gas storage facilities from Board jurisdiction. 980 C.M.R. § 1.01(4)(e).

The regulation at 980 C.M.R. § 1.01(4)(e)(1) establishes an exemption from Siting Board jurisdiction for gas storage facilities with a capacity of less than of 25,000 gallons. Because both of the UMASS alternatives involved LNG storage facilities with a capacity greater than 25,000 gallons, the Siting Board concluded that the proposed LNG storage facility would not qualify for the exemption provided by Section 1.01(4)(e)(1) (Advisory Ruling at 5).

Instead, the Siting Board decided that it would waive its minimum size regulation, as authorized by 980 C.M.R. § 1.02(1).[5] The Board found good cause to waive the minimum size regulation because the regulation is intended to exempt non-utility storage facilities (the UMASS LNG storage facility is a non-utility facility) and the UMASS storage facility would be close to the 25,000-gallon jurisdictional threshold (id. at 5-6). The Board also noted that the UMASS facility would be temporary in nature, and was expected to produce cost savings, emission reductions, and reliability benefits (id. at 6).

C. The Actual UMASS Facility

Following issuance of the Advisory Ruling, UMASS began the permitting process for the temporary LNG Facility, along with obtaining storage facility equipment, LNG supplies, and LNG transportation via a Request for Proposal ("RFP") process. Consistent with the Advisory Ruling, the LNG Facility was designed and permitted to operate for two heating seasons, beginning in December 2012. Site construction was completed in the fall of 2012 and UMASS began using LNG to fuel the CHP equipment in December 2012. Over the last two winter

[5] Section 1.02(1) of the 980 C.M.R. provides that "Where good cause appears, not contrary to statute, the Board and any Presiding Officer may permit deviation from any rules contained in 980 C.M.R."

heating seasons, UMASS vendors provided LNG supply by connecting a skid-mounted vaporization unit to the CHP plant and storing LNG in up to two tanker trailers parked beside the vaporization unit. The LNG equipment was dismantled and removed during the non-winter months. LNG was delivered as needed by tanker trailers from two LNG suppliers: GDF Suez and Prometheus Energy. Woodard stated that the tanker trailers ranged in size from 10,000 to 13,000 gallons capacity, although most were not greater than 12,500 gallons.

In the June 20, 2014 communication to the Siting Board, Woodard provided a report prepared by UMASS regarding the results to date of the temporary LNG storage facility and the university's future plans. According to UMASS, the CHP facility used a total of 359,813 million British thermal units ("MMBtu") of LNG over the two-year period, producing cost savings of $3.9 million and 7,230 metric tons of carbon dioxide ("CO_2") emission reductions compared to the use of ULSD. UMASS also noted that because the duct burner in the CHP unit can only operate on natural gas, the use of LNG has improved reliability of the CHP unit on peak winter days when natural gas is curtailed.

UMASS's report indicated that the university is "in the midst of a construction boom as the campus expands its facilities to meet its academic and research goals." The report noted that the number of new buildings being built over the next three years will increase both steam and electrical load served by the CHP unit and that UMASS is currently examining options to serve this future load. Due to capacity limits on natural gas from Berkshire Gas, new load during the winter months will increase the amount of backup fuel used in the CHP – either LNG or ULSD.

UMASS stated that it has tasked the engineering firm of Fuss & O'Neill with examining the feasibility of constructing a permanent LNG facility. The facility would utilize the same site, but would have two 18,000-gallon vertical tanks. Due to the amount of additional study needed and continuing market uncertainties, UMASS stated that it cannot commit the necessary resources for a permanent LNG facility at this time. Furthermore, UMASS contends that a permanent storage facility could not be permitted and constructed in time for the upcoming heating season. Based on these assertions, UMASS is seeking a three-year extension of the Siting Board's Advisory Ruling waiver.

II. ANALYSIS

In the Advisory Ruling, the Board used its authority granted by 980 C.M.R. § 1.02(1) to waive the 25,000-gallon threshold that would have otherwise defined the UMASS LNG storage site as a facility subject to Siting Board jurisdiction. The Board did so because it found good cause to permit the deviation and found that granting the waiver would not be contrary to the relevant statute, G.L. c. 164, § 69G.

The reasons that demonstrated good cause for the Advisory Ruling waiver in 2012 remain valid today. The gas storage capacity of the LNG facility is close to the jurisdictional threshold and involves a non-utility, temporary facility; substitution of LNG for ULSD reduces carbon emissions and other pollutants and thereby furthers the environmental policies of the Commonwealth; and the LNG storage facility is beneficial to the students, staff and faculty of UMASS and the taxpayers of the Commonwealth by producing significant cost savings. The Siting Board also emphasizes on the fact that the UMASS LNG facility has been inspected yearly since its inception, and such inspections have found the facility compliant with federal, state, and local safety requirements.[6]

As proposed by UMASS, the LNG storage facility would remain a "temporary" facility and, UMASS argues, should be considered as such for the next three years by both the Siting Board and Pipeline Safety. The Siting Board notes that pursuant to federal and Department regulations, mobile and temporary LNG facilities are subject to less stringent construction and operational requirements than permanent LNG facilities. 49 C.F.R. § 193.2019; 220 C.M.R. § 112.01 et seq. According to the director of Pipeline Safety, there is no prescribed time period for an LNG facility to transition from a temporary or short-term application facility to a permanent one. The director of Pipeline Safety interprets "temporary" as a relatively brief time period and expects the transition to a permanent facility to occur as soon as practicable.

UMASS has provided several reasons as to why construction of a permanent LNG facility is not yet advisable or feasible. These include: (1) continuing developments in the natural gas marketplace that could increase supplies of pipeline gas in the coming years and

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[6] The director of Pipeline Safety reports that Department pipeline safety engineers inspected the UMASS LNG facility before the start of each of the past two heating seasons and will continue to do so.

render the use of LNG either unnecessary or overly costly; (2) the long lead time required to design a permanent storage facility and obtain Siting Board and other approvals; and (3) the time required to successfully complete the capital budgeting process within UMASS.

Nevertheless, the Siting Board finds that the requested three-year extension of the Advisory Ruling waiver and its basis, in part, on the LNG facility being considered a "temporary" facility, is too long and not necessary to address the specific concerns cited by UMASS. The Siting Board finds that a two-year extension, through the 2015/2016 heating season, is a sufficient amount of time for UMASS to complete its market and operational assessment of LNG storage and to determine appropriate next steps.

III. SUPPLEMENTAL ADVISORY RULING

Accordingly, for the reasons stated above and in the 2012 Advisory Ruling, the Siting Board hereby advises that, pursuant to 980 C.M.R. § 1.02(1), there continues to be good cause to deviate from the 25,000-gallon threshold in 980 C.M.R. § 1.01(4)(e) in this matter and that such a deviation would not be contrary to statute. Therefore, the Siting Board further advises UMASS that it may continue to use two LNG tanks, as described above, with a combined capacity of 30,000 gallons or less, as a temporary LNG storage facility through the end of the 2015/2016 heating season at its CHP location without the need to seek facility approval from the Siting Board.

The caveats stated at the end of the Advisory Ruling remain in force. First, as set forth in 980 C.M.R. § 2.08, "[n]o advisory ruling shall bind or otherwise estop the Board in any pending or future matter." If an entity seeks a binding decision of the jurisdictional issues raised by this proceeding, the entity may either file a petition to construct and raise the issue in the context of that proceeding or may seek a determination of Siting Board jurisdiction pursuant to 980 C.M.R. § 2.09.

Second, in rendering this Supplemental Advisory Ruling, the Siting Board assumes, but does not expressly find, that all material facts have been stated and that the facts are as represented by Woodard and UMASS in their submissions to the Siting Board. Should the

material facts presented by Woodard or UMASS change or be inaccurate, this Supplemental Advisory Ruling may not be applicable.

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General Counsel

Dated this August __, 2014